

Installation and operating instructions

Antenna in the Siedle housing
ES314.2001

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1 Introduction

About these instructions

These instructions contain important information and instructions for installation operation of the wall scanner antenna in the Siedle housing.

- Read through the instructions carefully before starting the installation work and putting into service.
- Keep the instructions in a safe place and pass them on to each subsequent user of the antenna.

Explanation of the symbols and signal words used

 WARNING	Indicates hazards which could result in severe or fatal injuries.
 CAUTION	Indicates hazards which could result in minor or moderate injuries.
CAUTION	Indicates hazards which could result in damage to property.
Note	Indicates information and tips for optimum use of the instructions and the product.

Target group

Faultless, safe function of the antennas depends to a large extent on proper installation.

These instructions are therefore directed at competent personnel, who have completed suitable training or have experience appropriate for installation, maintenance, care, disposal and maintenance of antennas or comparable products.

OPERTIS Support

If you have any questions which are not answered by the information provided in these instructions, please contact

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Up-to-date information

All details of the product, images, dimensions and versions are correct at the time of delivery of the product. We reserve the right to make changes in line with technical progress and the resulting continuous improvement process of our products.

The current version of these instructions and further information is also available on our internet site www.opertis.de.

Dated 12/2014

2 Product Description

Overview

The following antenna is described in these instructions:

Art. No. / Name	Drawing
ES314.2001 Antenna in the Siedle housing	

Operating principle

The OPERTIS eLOCK eXpress locking system ensures continuous, consistent fitout of a building. Special terminal devices are available for different door types.

The antenna consists only of a reading unit. A connected controller is required for operation of the antenna. The power supply is provided via the controller or a suitable power pack.

The antenna is used solely for data transmission and signalling. All security relevant functions such as evaluation of the communication with the transponder or control of the relay are carried out by a controller. The data between the antenna and controller is transmitted in encrypted form. This ensures the greatest possible protection against manipulation.

The management and programming of the terminals, including the issue of access authorisations, is carried out using the eLOCK eXpress management software.

Various types of passive transponders without their own power supply, such as key fobs, cards or customer-specific types, are available in the eLOCK locking system for authorisation at the terminals. These must be held at the antenna for authorisation checking.

Signalling

The signalling of the terminals depends on the settings in the eLOCK eXpress software. Optical signalling is switched on by default. A buzzer can be switched on optionally for the acoustic signalling.

The additional power consumption for the buzzer reduces the number of locking cycles that can be achieved by battery-operated terminals.

Detailed Information

Further information on the product is given in Section 11 "Product specification".

3 Intended Use

Area of use

The antennas are only used together with OPERTIS controllers.

The antennas are suitable for installation in the Siedle door intercoms, Vario and Compact series.

Combinations of the wall scanner products:

Note

The protected outdoor area is an area which is free from splashed water in all directions.

Product	Area of use
TS controller / UP controller	Suitable for use in the protected indoor area.
Antenna in conjunction with - cover cap 80x80 - Spacer frame, low (optional)	Suitable for use indoors or in the protected outdoor area.
Antenna in conjunction with - cover cap 80x80 - Spacer frame IP65	Suitable for use outdoors.
Antenna in conjunction with - cover cap 55x55	Suitable for use indoors or in the protected outdoor area.

Product	Area of use
Siedle antenna in built-in frame of a Siedle Vario or Compact series door intercom system	Degree of protection to EN 60529 IP54
UP controller / Compact wall scanner in conjunction with - cover cap 80x80 - Spacer frame, high (optional)	Suitable for use indoors or in the protected outdoor area.
UP controller / Compact wall scanner in conjunction with - Surface-mounted (on wall) housing IP65	Suitable for use outdoors.
UP controller / Compact wall scanner in conjunction with - cover cap 55x55	Suitable for use indoors or in the protected outdoor area.
Compact wall scanner If using the individual antenna and UP controller components, refer to the information above.	

Condition of the product

Antennas may only be used if they are in faultless technical condition.

Independent modifications and changes to the product are not allowed.

Ambient conditions

- Use in particularly harsh environments with conditions such as aggressive gases or extreme temperatures is not allowed.
- Note!
In general, avoid laying the cables in the immediate vicinity of noise sources. Always use a shielded cable in ambient conditions with EMC disturbance.

If you have any questions, please contact OPERTIS Support.

Residual Risk

If used as intended and in compliance with the maintenance instructions, this product will help to maintain your property security.

However, the following residual risks cannot be excluded:

- If the mains voltage fails there is a risk of being locked in or out. In this case it is only possible to open the door using mechanical tools. In this case, contact OPERTIS support.
- If the electronics or the connection cable to the controller fail there is a risk of being locked in or out. It is then only possible to open the door using mechanical tools. In this case, contact OPERTIS support.
- If an antenna is used for access control to a fuse box there is a risk of being locked in or out if a fuse is defective. It is then only possible to open the door using mechanical tools.

4 Safety Instructions

The following safety instructions must be noted and followed before use! OPERTIS does not accept any liability whatsoever for personal injuries or damage to property caused by failure to follow these instructions!



CAUTION

Risk of being locked in or out

Without a functioning antenna in conjunction with a door locking mechanism, the door cannot be opened if the latch engages in the strike plate.

When installing the antenna, keep the door open, or ensure that the door can be opened at any time without use of the wall scanner.



CAUTION

Risk of malfunctions

Malfunctions can occur if the antenna is installed in the immediate vicinity of alternating electromagnetic fields (e.g. transformers, MRI scanners, etc.) and transmission equipment.

Before installing, check whether any of the above-mentioned interference factors could affect the function of the wall scanner.



CAUTION

Risk of personal injuries

The antenna is fitted with an LED which has a very bright light. If the antenna is supplied with voltage without a cover cap in front of the antenna the LED can dazzle. Do not look directly into the light of the LED.

CAUTION

Risk of damage to property

Electronic components can be irreparably damaged if touched.

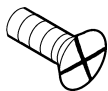
Note and follow the regulations and instructions in the EN 61340-5-1 standard!

Do not carry out any installation or maintenance work unless the power supply is switched off.

Note and follow the VDE guidelines (VDE-0100)!

5 Scope of supply

The scope of supply includes the following parts:

Part	Name
	ES314.2001 Antenna in the Siedle housing
	Device screw (4 no.)

6 Installation

Overview

The installation is divided into the following activities:

- Connection at the controller
- Functional test



CAUTION

Risk of malfunctions

If more than three antennas are operated via one controller, which is operated with PoE, the max. allowable power output of the controller can be exceeded. This can cause failure of the controller.

An additional power supply (6-12V DC) must be used.

Installation Tools Required

You will need the following tools for the installation:

- Suitable screwdriver for installing screws available on site.
- Cable strippers or side cutters for stripping off the insulation and shortening the connection cable.

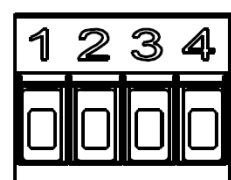
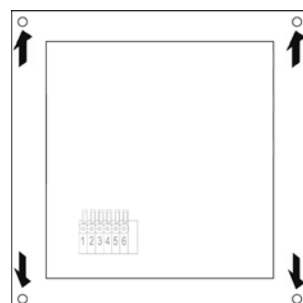
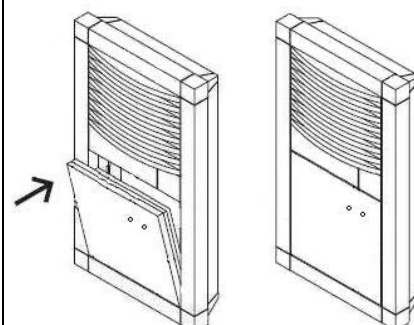
CAUTION**Unauthorised access following installation**

In the as-delivered condition, the antenna is in construction site mode. Access is possible with any OPERTIS transponder, even if not programmed.

Immediately following installation you should program the authorisations to prevent unauthorised access; refer to the eLOCK eXpress Quick Start Guide. Have the date and time reset, if necessary by your eLOCK eXpress trade partner.

Connection at the controller

Proceed as follows:

Step	Activity	Figure
1	Connect all necessary connection cables to the antenna and the controller, see "Pin Assignment" table:	Connection terminal at the rear of the antenna: 
	Set the terminating resistance, see section: "Connecting further antennas". Then fix the cover onto the bottom section using the device screws provided.	Rear of the antenna: 
2	Insert the antenna in the Siedle housing (order separately, not included) so that the LEDs are in the top right-hand side.	

Pin assignment

The following connections must be connected for the connection of the antenna with the controller.

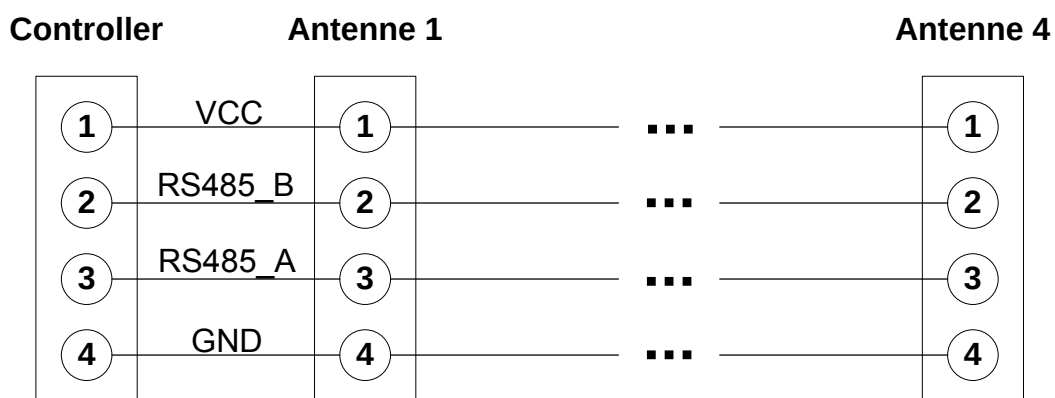
Connection description	Connection Controller	Antenna connection
VCC	Bus 1	1
RS485_B	Bus 2	2
RS485_A	Bus 3	3
GND	Bus 4	4

Connecting Additional Antennas

A maximum of 4 antennas can be connected to one controller.

The data connection is made via RS485 bus wiring (maximum allowable total length is 300 m), i.e. the connection cables are connected from the controller to the first antenna and from there to the second antenna, etc. Star-type cabling is not possible!

Connection diagram



Terminating resistance

For a secure RS485 bus data connection, a terminating resistance must be set at both ends of the bus cable. This is activated in the factory for all antennas in the ON position (ON-OFF switch, see Figure: "Front of antenna"). The switches at all other antennas within the bus connection must be set to OFF.

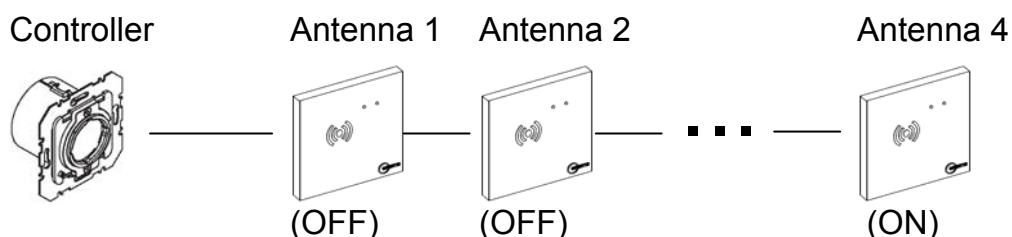
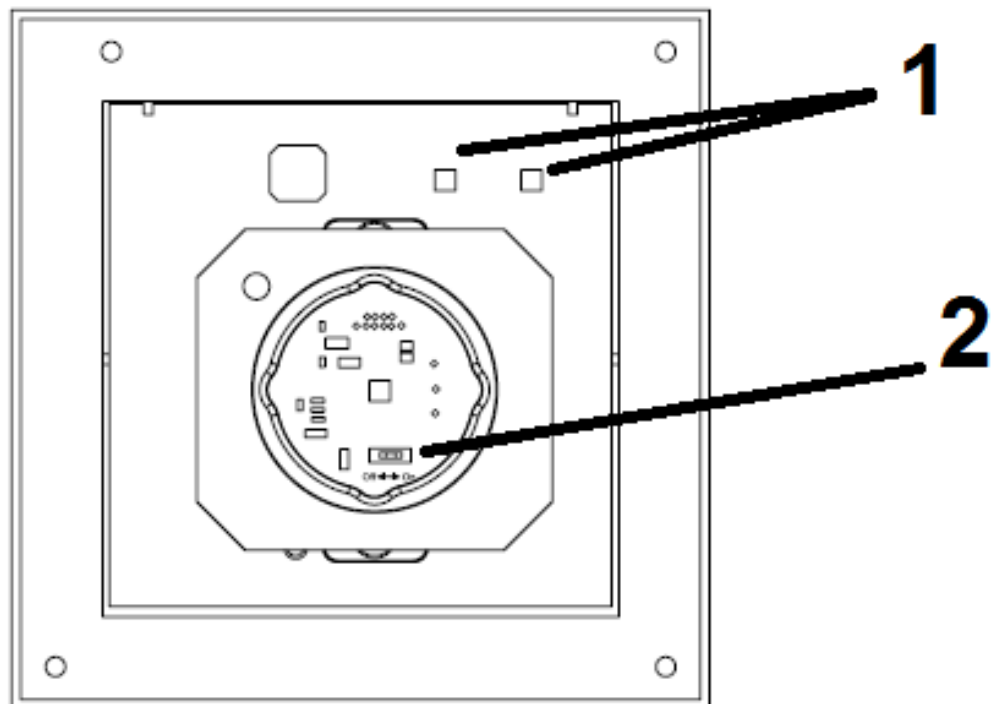


Figure: front of antenna

1	Signalling LEDs
2	Terminating resistance (ON position is labelled.)

Functional test**CAUTION****Risk of being locked in or out**

Peripheral devices cannot be controlled without functional controllers and without a functional antenna.

During the functional test of the wall scanner it is necessary to ensure that the systems controlled by the controller do not obstruct anyone at the passage/entrance.

Note

If a controller is controlled by several antennas, the functional test must be performed separately for each antenna.

Proceed as follows:

Step	Activity	Result
1	Switch on power supply.	○ Initialisation processes: The controller sets up communication with the connected antennas, duration max. 15 seconds. Signalling to the antenna: fast red flashing, 1 short green flash: ○ Standby mode: Wall scanner in standby state. Signalling to the antenna: slow red flashing, relay has not picked up.
2	Hold any OPERTIS transponder in front.	○ Controller's relays pick up, signalling to the antenna: 2 short red-green flashes and a short, high tone. Example: Activated door opens. ○ After the connection time has expired: Relay of the controller drops out again. Signalling to the antenna: Short red flashing and short, high tone. Example: Activated door closes.

7 Operation and Control

Programming Terminals and Transponders

Terminals and transponders are programmed using the eLOCK eXpress management software.

Optical and acoustic signals

Note

The signalling of the terminals depends on the settings in the eLOCK eXpress software. Optical signalling is switched on by default. A buzzer can be switched on optionally for the acoustic signalling.

All optical and acoustic signals are given in the eLOCK eXpress system documentation.

In case of certain system states and events the wall scanner emits acoustic and/or optical signals:

Optical signal	Meaning
2x short blue-blue 1x short green	Programming with the ToDo card completed successfully.
2x short blue-blue 2x short red-red	Programming with the ToDo card not completed successfully.
2x short blue-blue 1x short red	No programming job with the ToDo card exists for the terminal
repeated short blue	Programming in progress with the NFC stick.
2x short green-blue	Use of the security card
2x short green-green	Switching on of fitting by an authorised transponder.
2x short red-red	No switching on of fitting, transponder is not authorised.
2x short red-green	Switching on of fitting in construction site mode
continuous short red	Wall scanner is ready for use (standby)
2x short red-red 4x long yellow	System error, contact sales partner.
continuous short yellow	The fire service transponder has been used.

8 Maintenance, Cleaning and Care

Maintenance and cleaning may only be carried out by qualified personnel.

We do not provide any warranty whatsoever for damage caused by improper handling.

Intervals

Activity	Interval
Maintenance	1 year

Cleaning and Care

Care and cleaning are not necessary for the antenna.

Maintenance



CAUTION

Risk of being locked in or out

Without a properly functioning fitting, the door cannot be opened when the latch drops into the strike plate.

Carry out functional checks while the door is open.

The following functional tests are to be performed once a year, if necessary by the eLOCK eXpress trade partner:

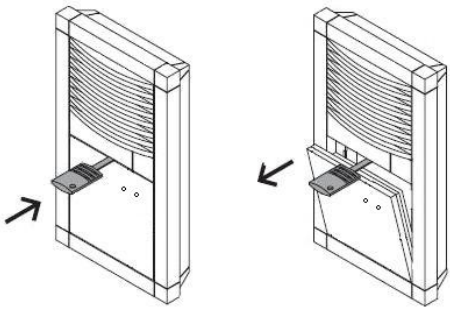
Step	Activity	Result
1	Hold an authorised OPERTIS transponder in front of the connected antenna(s) of the controller.	The connected peripheral device opens for the duration of the defined opening time. The antenna signals as described above, see "Optical and acoustic signals" section.
2	Reset the date and time.	

9 Dismantling

Note

Dismantle in the reverse order. Therefore, refer to the figures in Section 6 "Installation".

Proceed as follows:

Step	Activity	Figure
1	Switch off power supply.	
2	To remove the antenna, the unlocking mechanism between two Siedle modules must be actuated using the Siedle Vario key (order separately, not included). The antenna can then be removed from the housing.	
3	Disconnect the connection cables from the connection terminals of the antenna. To do this, press the lever of the terminal connector with a small screwdriver and pull out the cables.	

10 Problems and Solutions

Problem	Possible cause	Solution
Antenna has no ready signal.	Power supply is defective or not connected.	Ensure power supply.
	Connection cable to the antenna is defective or not connected.	Ensure connection to the antenna.
	Operating voltage not within the allowable range.	Connect correct power supply (voltage).
	Controller is defective.	Replace the controller.
	Antenna is defective.	Replace antenna.
	Relay has already picked up.	Wait for the relay to drop out.
Transponder is not recognised (no positive or negative acknowledgement).	Transponder is defective.	Replace transponder.
	Antenna is defective.	Replace antenna.
Transponder obtains no access	Transponder is not programmed or does not have the necessary authorisations	Program the transponder.
	Controller has wrong date or wrong time	Reset the date and time.
Antenna is temporarily not functioning, no signalling.	If several antennas are connected, communication is in progress at another antenna (authorisation of a transponder or programming process).	Wait for the communication process at the other antenna to finish.

Problem	Possible cause	Solution
Antenna is not detected by the controller.	Termination resistances set incorrectly.	Set the termination resistances correctly.
Each transponder is authorised for the lock.	Wall scanner is not programmed ("construction site mode").	Program the wall scanner; see eLOCK eXpress Quick Start Guide.
Failure of the controller and the antennas.	Too many antennas at the bus.	Secure power supply for several antennas from somewhere else.
No optical or acoustic signalling at the terminal.	Signalling has been switched off in the eLOCK eXpress software.	Switch on signalling in the software.

11 Product Specification

Declaration of Conformity

Konformitätserklärung gemäß dem Gesetz über Funkanlagen und Telekommunikationsendeinrichtungen (FTEG) und der Richtlinie 1999/5/EG (R&TTE)

Declaration of Conformity in accordance with the Radio and Telecommunications Terminal Equipment Act (FTEG) and Directive 1999/5/EC (R&TTE Directive)

Hersteller

The manufacturer

OPERTIS GmbH

Anschrift

Address

Prof.-Bier-Straße 1-5

34454 Bad Arolsen

Deutschland/Germany

erklärt, dass das Produkt

declares that the product

Wandler System

ES314.1000T

ES314.1000U

ES314.2000

ES314.2001

ES314.0001U

Type

Type

Funkanlage

Radio equipment

Verwendungszweck

Intended purpose

Identifikation RFID (13.56MHz)

Gerätekategorie

Equipment class

Class-1

bei bestimmungsgemäßer Verwendung den grundlegenden Anforderungen des § 3 und den übrigen einschlägigen Bestimmungen des FTEG (Artikel 3 der R&TTE) entspricht.

complies with the essential requirements of §3 and the other relevant provisions of the FTEG (Article 3 of the R&TTE Directive), when used for its intended purpose.

Gesundheit und Sicherheit gemäß § 3 (1) 1. (Artikel 3 (1) a))

Health and safety requirements pursuant to § 3 (1) 1. (Article 3(1) a))

angewendete harmonisierte Normen: Harmonised standards applied...	Einhaltung der grundlegenden Anforderungen auf andere Art und Weise (hierzu verwendete Standards/Spezifikationen) Other means of proving conformity with the essential requirements (standards/specifications used).
EN 50364: 2010 EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011	

Schutzanforderungen in Bezug auf die elektromagn. Verträglichkeit § 3 (1) 2, Artikel 3 (1) b))

Protection requirements concerning electromagnetic compatibility § 3(1)(2), (Article 3(1)(b))

angewendete harmonisierte Normen: Harmonised standards applied...	Einhaltung der grundlegenden Anforderungen auf andere Art und Weise (hierzu verwendete Standards/Spezifikationen) Other means of proving conformity with the essential requirements (standards/specifications used).
ETSI EN 301 489-3 v 1.4.1	

Maßnahmen zur effizienten Nutzung des Funkfrequenzspektrums

Measures for the efficient use of the radio frequency spectrum

Luftschnittstelle bei Funkanlagen gemäß § 3(2) (Artikel 3(2))

Air interface of the radio systems pursuant to § 3(2) (Article 3(2))

angewendete harmonisierte Normen: Harmonised standards applied...	Einhaltung der grundlegenden Anforderungen auf andere Art und Weise (hierzu verwendete Standards/Schnittstellenbeschreibungen)... Other means of proving conformity with the essential requirements (standards/interface specifications used)...
ETSI EN 301 330-1 v 1.7.1 ETSI EN 301 330-2 v 1.5.1	

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Bad Arolsen, 2014-05-12

Ort, Datum

Place & date of issue

Andreas Steinkamp

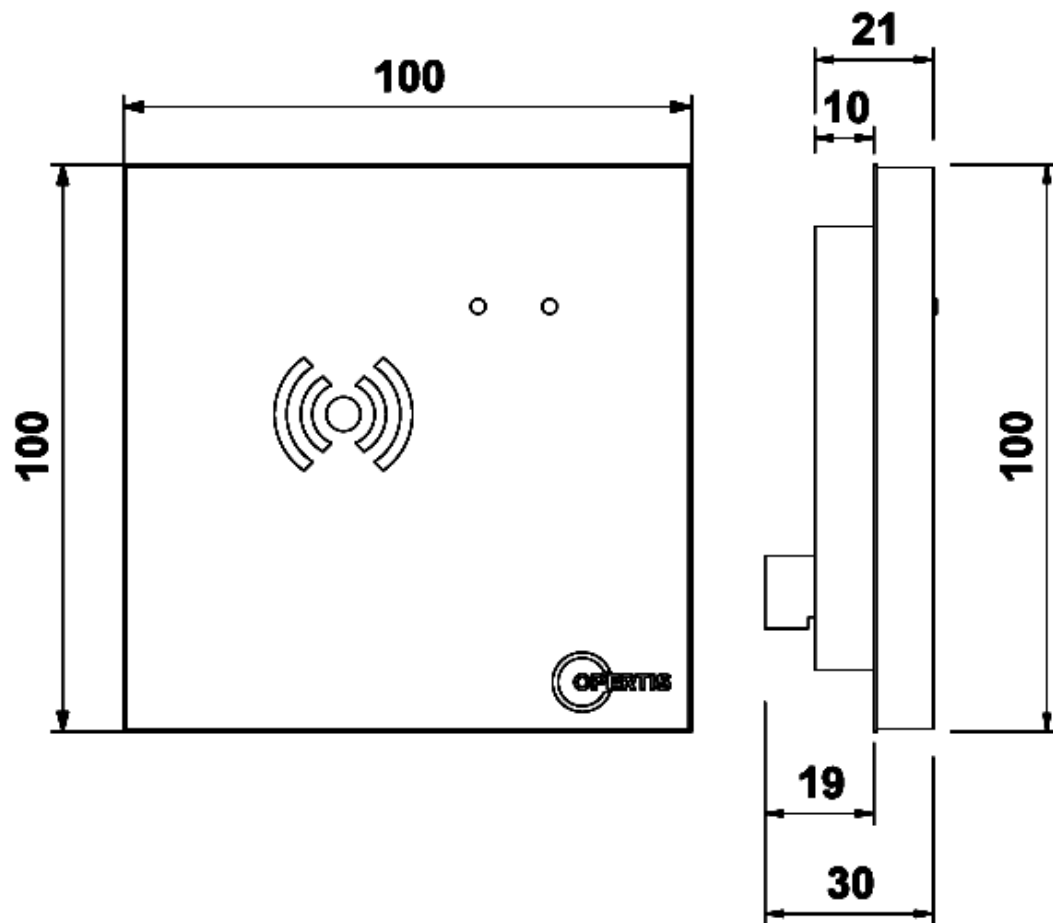
Geschäftsführer / CEO

Name und Unterschrift

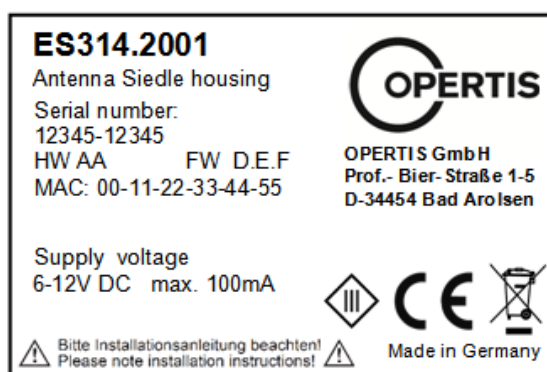
Name and signature

Dimensions

All dimensions given in mm.



Rating plate



Note on the Operating System

The antenna is operated with the FreeRTOS operating system. Further information under: www.freertos.org

Technical data**Installation environment**

Design	Siedle colour scheme (white, silver metallic, titanium metallic, graphite brown metallic)
Installation environment	Siedle Vario / Compact intercoms
Installation distance between antennas	at least 100 mm in 3D space

Power supply / connections

Power supply	The antenna is supplied with voltage (power) via a controller or a power pack.
Antennas	A maximum of 4 antennas can be connected to one controller.
Connection cable	single wire 0.14 - 0.5mm ² Stripped length max. 9mm at the controller max. 5mm at the antenna
Length of the connection cable of antennas	≤ 300m (connected in series)
Pin assignment	see Section 6: "Installation"

Specific data

Operating temperature	-20 °C to +55 °C
Storage temperature	-40 °C to +85 °C
Humidity for operation and storage	max. 95% non-condensing
Degree of protection: to EN 60529	IP54 in the Siedle frame

12 Disposal

Product



Disposal in accordance with WEEE Directive 2012/19/EC:

- Do not dispose of product in the local household waste.
- Send product back to OPERTIS or dispose of it at a communal collection point for hazardous electronic wastes.

Product packaging

The product packaging must be disposed of through the local household or paper waste collection facility.

Notes:



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